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JUN 09 2006

In the Claims:

Claims 1 to 24 (Canceled).

1     **25.** (New) A composite material comprising a plurality of discs  
2         (10) made of matrix material said discs (10) forming a  
3         stack, each disc (10) of matrix material in said stack  
4         comprising: a radially inner opening (11) surrounded by an  
5         inner disc edge and a disc ring portion surrounding said  
6         inner opening and surrounded by an outer disc edge, said  
7         disc ring portion comprising a groove (13) and at least one  
8         reinforcing fiber (14) embedded in said groove (13) thereby  
9         forming a fiber reinforced disc ring section, said  
10        reinforcing fiber (14) and said groove (13) being spaced  
11        radially outwardly from said inner disc edge thereby  
12        forming an inner first disc ring section free of  
13        reinforcing fiber, said reinforcing fiber (14) and said  
14        groove (13) being spaced radially inwardly from said outer  
15        disc edge thereby forming an outer second disc ring section  
16        free of reinforcing fiber, said fiber reinforced disc ring  
17        section being positioned between said first and second disc  
18        ring sections free of reinforcing fiber.

1     **26.** (New) The composite material of claim 25, wherein said  
2         first disc ring section free of reinforcing fiber comprises  
3         a first radial width that is the same in each disc in said  
4         stack, and wherein said second disc ring section has a



5 second radial width that differs in different discs in said  
6 stack.

1 27. (New) The composite material of claim 25, wherein said  
2 groove in each disc in said stack has a spiral shape so  
3 that said reinforcing fiber (14) or fibers extend spirally  
4 inside said fiber reinforced disc ring section.

1 28. (New) The composite material of claim 26, wherein said  
2 second radial width that differs in different discs is  
3 individually adapted for each disc in said stack.

1 29. (New) The composite material of claim 25, comprising said  
2 matrix material as titanium or a titanium alloy, and  
3 comprising said at least one reinforcing fiber as a silicon  
4 carbon fiber in each disc in said stack.

1 30. (New) The composite material of claim 26, wherein said  
2 second disc ring section free of reinforcing fiber in one  
3 disc in said stack is overlapped by at least one fiber  
4 reinforced disc ring section of at least one neighboring  
5 disc in said stack at an interface between said fiber  
6 reinforced disc ring section and said second disc ring  
7 section free of reinforcing fiber.

1 31. (New) The composite material of claim 25, wherein said  
2 groove or grooves in neighboring discs of said stack are  
3 radially displaced relative to each other so that said at



4 least one reinforcing fiber in said groove or grooves in a  
5 disc is radially staggered relative to respective  
6 reinforcing fibers in neighboring discs in said stack.

1 32. (New) A method for producing a composite material in the  
2 form of a stack of discs, said method comprising the  
3 following steps:

- 4 a) manufacturing a plurality of said discs (10) of matrix  
5 material,  
6 b) forming at least one groove (13) in each disc of a  
7 number of discs in said plurality of discs (10),  
8 c) inserting at least one reinforcing fiber (14) in each  
9 groove (13) of a respective disc of said number of  
10 discs,  
11 d) consolidating each disc with a reinforcing fiber (14)  
12 in its groove (13) so that the reinforcing fiber (14)  
13 is surrounded on all sides and embedded in said matrix  
14 material,  
15 e) stacking consolidated discs to form said stack, and  
16 f) joining each disc in said stack to a neighboring disc  
17 or discs in said stack to form a solid stack.

1 33. (New) The method of claim 32, further comprising performing  
2 said step of manufacturing by producing said plurality of  
3 discs (10) with a radially inner opening (11) surrounded by  
4 an inner disc edge, forming said at least one groove in a  
5 disc portion with a first spacing from said inner disc  
6 edge, and forming said at least one groove in said disc



portion with a second spacing from a radially outer edge of said disc (10) whereby a first disc ring section free of reinforcing fiber is formed radially inwardly of said groove (13) and a second disc ring section free of reinforcing fiber is formed radially outwardly of said groove, so that said disc portion with said at least one groove (13) therein is positioned between said first and second disc ring sections free of reinforcing fiber.

34. (New) The method of claim 32, further comprising performing said step of forming by making said groove (13) to a depth, in an axial direction, larger than a diameter of said at least one reinforcing fiber (14) so that lands (15) project above said at least one reinforcing fiber (14) inserted in said groove.

35. (New) The method of claim 32, further comprising performing said step of consolidating each disc (10) with at least one reinforcing fiber (14) in its groove (13) by exposing said disc to a superplastic deformation so that said fiber is enclosed on all sides by matrix material.

36. (New) The method of claim 33, wherein said step of stacking is performed so that each radially inner opening (11) of each disc in said stack is axially aligned with all other radially inner openings to thereby form a hollow cylinder.



1 37. (New) The method of claim 33, further comprising forming  
2 said at least one groove with at least two different radial  
3 dimensions in two neighboring discs in said stack so that  
4 said disc portion with said at least one groove (13)  
5 therein reaches radially outwardly to different extents in  
6 said two neighboring discs in said stack whereby said  
7 second disc ring section free of reinforcing fiber  
8 intermeshes with said disc portion having said at least one  
9 groove therein for an increased strength of said stack.

1 38. (New) The method of claim 32, wherein said step of joining  
2 is performed as a diffusion welding of stacked discs (10)  
3 to form said solid stack.

1 39. (New) The method of claim 32, further comprising inspecting  
2 each disc, following said consolidating step, for any  
3 breaks in said reinforcing fiber or fibers and for any  
4 cracks in said matrix material, and discarding any disc in  
5 which a break or a crack is discovered.

[REMARKS FOLLOW ON NEXT PAGE]